

CLAIMS

1. An optical analysis device comprising:
 - a light-transmitting member for transmitting light, having an external face capable of immobilizing a detection-objective substance;
 - a light separating means for separating an exciting light introduced into the light-transmitting member at a first end thereof and transmitted through the light-transmitting member; and a fluorescence light produced by excitation of the detection-objective substance by the exciting light, at a second end of the light-transmitting member, and
 - a detecting means for detecting the fluorescence light separated by the light separating means.
- 15 2. The optical analysis device according to claim 1, wherein the light-separating means is a diffraction grating.
3. The optical analysis device according to claim 1, wherein the light-transmitting member comprises an optical waveguide.
4. The optical analysis device according to claim 1, wherein the optical analysis device comprises a flow path which covers the light-transmitting member and has an inlet for introducing the detection-objective substance and an outlet for discharging the detection-objective substance.

5. The optical analysis device according to
claim 1, wherein the light-transmitting member has at
the first end thereof a coupling means for coupling
the exciting light to the light-transmitting member.

5 6. The optical analysis device according to
claim 5, wherein the coupling means is a diffraction
grating.

10 7. The optical analysis device according to
any of claims 1 to 6, wherein the external face of
the light-transmitting member is capable of
immobilizing a trapping component for trapping the
detection-objective substance.

15 8. The optical analysis device according to
claim 7, wherein the trapping component traps the
detection-objective substance by an antigen-antibody
reaction.

20 9. The optical analysis device according to
claim 7, wherein the trapping component traps the
detection-objective substance by hybridization
reaction of DNA.